

Notice of Allowability

Application No.

10/762,927

Applicant(s)

ZHUANG ET AL.

Examiner

Art Unit

Abdel A. Mohamed

1654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment and remarks filed 09/20/06 and telephonic interview of 12/08/06.
2. ☒ The allowed claim(s) is/are 1-37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20061211</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Atkinson on 12/08/06.

This application has been amended as follows:

Replace the claims as follows.

Claim 1 (currently amended) A method for preparing a bioactive glycoprotein fraction comprising in order the steps of:

extracting the fruiting body of *Grifola frondosa* with ethanol at room temperature, and removing the ethanol extract;

extracting the resulting residue with hot water at 100⁰-120⁰ C, and adding ethanol to the hot water extract to a final ethanol concentration of 50-75% by volume;

removing the resulting precipitate and floating matter after standing at 4⁰-10⁰ C for 8-12 hours, wherein said floating matter is on the liquid or in the liquid or adhering matter to vessel wall; and

collecting a fraction molecular weight equal to or greater than 14,000 daltons from the supernatant; and

wherein the bioactive glycoprotein fraction comprises a bioactive glycoprotein having a protein to saccharide ratio ranging from about 75:25 to about 90:10.

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Claim 2 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 1 wherein said collection of a fraction with a molecular weight equal up or greater than 14,000 daltons is performed by dialysis.

Claim 3 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 1 wherein said collection of a fraction with a molecular weight equal up or greater than 14,000 daltons is performed by ultrafiltration.

Claim 4 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 1 wherein said collection of a fraction with a molecular weight equal up or greater than 14,000 daltons is performed by centrifugal filtration.

Claim 5 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 1 further comprising purifying said above fraction to obtain the glycoprotein fraction with average molecular weight of 20,000 daltons.

Claim 6 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 5 wherein said purification is performed using gel filtration chromatography.

Claim 7 (currently amended) The method for preparing a bioactive glycoprotein fraction as recited in Claim 5 wherein said purification is performed using electrophoresis.

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Claim 8 (currently amended) The method for preparing a bioactive glycoprotein fraction containing a glycoprotein as a main component as recited in Claim 1 wherein said hot water extraction is performed at 1:2 atmosphere pressure.

Claim 9 (currently amended) The method for preparing a bioactive glycoprotein fraction containing a glycoprotein as a main component as recited in Claim 1 wherein said removing of resulting precipitate and floating matter is performed at 4⁰ C.

Claim 10 (currently amended) The method for preparing a bioactive glycoprotein fraction containing a glycoprotein as a main component as recited in Claim 1 wherein said removing of resulting precipitate and floating matter is performed by centrifugation.

Claim 11 (currently amended) The method for preparing a bioactive glycoprotein fraction containing a glycoprotein as a main component as recited in Claim 1 wherein said removing of resulting precipitate and floating matter is performed by skimming.

Claim 12 (currently amended) The method for preparing a bioactive glycoprotein fraction containing a glycoprotein as a main component as recited in Claim 1 wherein said removing of resulting precipitate and floating matter is performed by pipetting.

Claim 13 (currently amended) A bioactive glycoprotein fraction produced by the process of Claim 1, comprising a glycoprotein said glycoprotein having a protein to saccharide

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~~ratio ranging from about 75:25 to about 90:10 and a molecular weight equal to or greater than 14,000 daltons.~~

Claim 14 (currently amended) A bioactive glycoprotein fraction produced by the process of Claim 1 wherein said bioactive glycoprotein fraction possesses ~~a protein to saccharide ratio ranging from about 75:25 to about 90:10 and an average molecular weight of about 20,000 daltons.~~

Claim 15 (currently amended) An antidiabetic, antihypertensive, antiobesity and antihyperlipidemic product comprising the bioactive glycoprotein fraction of Claim 13.

Claim 16 (currently amended) An antidiabetic, antihypertensive, antiobesity and antihyperlipidemic product comprising the bioactive glycoprotein fraction of Claim 14.

Claim 25 (currently amended) A health food or food product comprising at least one antidiabetic, antihypertensive, antiobesity and antihyperlipidemic activities wherein said bioactive glycoprotein fraction of Claim 14 is used as a food additive.

Claim 34 (currently amended) A health food having one or more of the properties from the group consisting of antidiabetic, antihypertensive, antiobesity and antihyperlipidemic activities wherein said health food comprises the bioactive glycoprotein fraction of Claim 15 is used as a food additive.

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Claim 35 (currently amended) A food product having one or more of the properties from the group consisting of antidiabetic, antihypertensive, antiobesity and antihyperlipidemic activities wherein said food product comprises the bioactive glycoprotein fraction of Claim 15 is used as a food additive.

Claim 36 (currently amended) A health food having one or more of the properties from the group consisting of antidiabetic, antihypertensive, antiobesity and antihyperlipidemic activities wherein said health food comprises the bioactive glycoprotein fraction of Claim 16.

Claim 37 (currently amended) A food product having one or more of the properties from the group consisting of antidiabetic, antihypertensive, antiobesity and antihyperlipidemic activities wherein said food product comprises the bioactive glycoprotein fraction of Claim 16.

CONCLUSION AND FUTURE CORRESPONDANCE

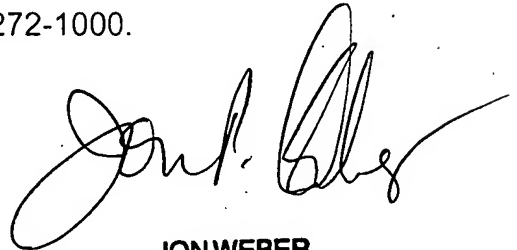
Claims 1-37 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdel A. Mohamed whose telephone number is (571) 272 0955. The examiner can normally be reached on First Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tsang Cecilia can be reached on (571) 272 0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



JON WEBER
SUPERVISORY PATENT EXAMINER



Mohamed/AAM
December 11, 2006